Appendix 1 (as supplied by the authors): Supplementary material

Methods:

In a secondary analysis, we also conducted an interrupted time series analysis using unadjusted segmented linear regression with an impact model assuming a level and slope change with no lag following a fee change (1,2). We calculated the Durbin-Watson statistic to determine if there was residual autocorrelation in the models.

We focused on two interaction terms for each fee change: (1) an interaction between group and a variable for pre/post fee change signaling a difference in the immediate effect (level) of the fee change on peritoneal dialysis use at 90 days between groups and (2) an interaction between group and time after fee change signaling a difference in trend of peritoneal dialysis use over time (slope) following a fee change between groups. A positive interaction implies a relative increase (or less of a decrease) in peritoneal dialysis use in the fee-for-service group compared with the salary group. A negative interaction implies a relative decrease (or less of an increase) in peritoneal dialysis use in the fee-for-service group compared with the salary group.

Results:

For the segmented regression analysis, the 95% confidence intervals for all beta coefficients reported include zero indicating there was no statistically significant difference in the immediate effect, nor the effect over time, of any fee change on peritoneal dialysis use between fee-for-service and salary groups (Table 3).

Supplementary Table S1: Characteristics of fee-for-service and salaried Nephrologists during study period 1 (January 1 2001 to March 31 2004) (percentage of Nephrologists unless otherwise indicated)

	fee-for-service		Salary		
	Before fee change 1	After fee change 1	Before fee change 1	After fee change 1	
Number of Months	15	24	15	24	
Number of Nephrologists	18	21	23	27	
Nephrologist years of practice since 1994, % (n)					
<=5 years	10 (55.6)	12 (57.1)	12 (52.2)	15 (55.6)	
6-10 years	8 (44.4)	9 (42.9)	11 (47.8)	12 (44.4)	
Clinical Workload					
<=25%	5 (27.8)	1 (4.8)	7 (30.4)	1 (3.7)	
26-60%	13 (72.2)	12 (57.1)	16 (69.6)	21 (77.8)	
>60%	-	8 (38.1)	-	5 (18.5)	
Practice location*†					
Urban city 1	13 (72.2)	14 (66.7)	8 (34.8)	9 (33.3)	
Urban city 2	2 (11.1)	4 (19.1)	15 (65.2) 18 (66.7)		
Other	3 (16.7)	3 (14.3)	-	-	

FFS=fee-for-service; Chi-square test (Fisher's exact test is employed when >= 20 % of the cells have an expected value less than 5) was used to determine significant differences within and between groups.

^{*} significant at p<0.05 for a difference between the fee-for-service and salary groups before the policy change

[†] significant at p<0.05 for a difference between the fee-for-service and salary groups after the policy change

Supplementary Table S2: Characteristics of fee-for-service and salaried Nephrologists during study period 2 (April 1 2005 to Dec 31 2014) (percentage of Nephrologists unless otherwise indicated)

		Fee-For-Servi	ce		Salary		
	Before fee change 2	Between fee change 2 and 3	After fee change 3	Before fee change 2	Between fee change 2 and 3	After fee change 3	
Number of months	24	24	69	24	24	69	
Number of Nephrologists	25	24	25	37	36	41	
Nephrologist years of practice since 1994, % (n)							
<=5 years	9 (36.0)	6 (25.0)	2 (8.0)	18 (48.7)	15 (41.7)	6 (14.6)	
6-10 years	8 (32.0)	11 (45.8)	5 (20.0)	8 (21.6)	12 (33.3)	13 (31.7)	
11-15 years	8 (32.0)	7 (29.2)	10 (40.0)	11 (29.7)	9 (25.0)	13 (31.7)	
16-20 years	-	-	8 (32.0)	-	-	9 (22.0)	
Clinical Workload*‡			1		'		
<=25%	6 (24.0)	5 (20.8)	2 (8.0)	11 (29.7)	8 (22.2)	3 (7.3)	
26-60%	7 (28.0)	7 (29.2)	13 (52.0)	20 (54.1)	19 (52.8)	35 (85.4)	
>60%	12 (48.0)	12 (50.0)	10 (40.0)	6 (16.2)	9 (25.0)	3 (7.3)	
Practice location*†‡							
Urban city 1	15 (60.0)	15 (62.5)	13 (54.2)	14 (37.8)	15 (41.7)	19 (47.5)	
Urban city 2	6 (24.0)	6 (25.0)	7 (29.2)	23 (62.2)	21 (58.3)	21 (52.5)	
Other	4 (16.0)	3 (12.5)	4 (16.7)	-	-	-	

Chi-square test (Fisher's exact test is employed when \geq 20 % of the cells have an expected value less than 5) was used to determine significant differences within and between groups.

^{*} significant at p<0.05 for a difference between the fee-for-service and salary groups before policy change 1

 $[\]dagger$ significant at p<0.05 for a difference between the fee-for-service and salary groups in the period between policy change 1 and 2

[‡] significant at p<0.05 for a difference between the fee-for-service and salary groups after policy change 2

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Supplementary Table S3: Results or					
Fee change / period	Difference between fee-for-service and salary groups in immediate change in percent on peritoneal dialysis at 90 days		Difference between fee-for-service and salary groups in change per calendar quarter in percent on peritoneal dialysis at 90 days		
	Regression coefficient (95% CI)	P value	Regression coefficient (95% CI)	P value	
Study period 1:					
Fee Change 1 April 1 2002: Weekly fee-for-service remuneration for peritoneal dialysis introduced at \$32.16	-19.24 (-46.23, 7.78)	0.16	-1.45 [-4.23, 1.33]	0.30	
Study period 2:					
Fee change 2 April 1 2007: Weekly fee-for-service remuneration for peritoneal dialysis increased from \$49.15 to \$70.94	2.36 [-19.80, 24.51]	0.83	-1.17 [-2.76, 0.43]	0.15	
Fee change 3 April 1 2009: Weekly fee-for-service remuneration for all dialysis patients=\$135	9.44 [-8.37, 27.25]	0.30	0.47 [-0.68, 1.62]	0.42	

Study period 1: Durbin-Watson statistic = 2.25, p = 0.62 for positive autocorrelation, p = 0.38 for negative autocorrelation. Study period 2: Durbin-Watson statistic = 2.08, p = 0.19 for positive autocorrelation, p = 0.81 for negative autocorrelation.

References

- 1. Wagner AK, Soumerai SB, Zhang F, Ross-Degnan D. Segmented regression analysis of interrupted time series studies in medication use research. *J Clin Pharm Therapeut* 2002;27:299-309.
- 2. Bernal JL, Cummins S, Gasparrini A. Interrupted time series regression for the evaluation of public health interventions: a tutorial. *Intern J Epidemiol* 2017;46:348-55.

A positive coefficient implies a relative increase (or less of a decrease) in peritoneal dialysis use in the fee-for-service group compared with the salary group. A negative coefficient implies a relative decrease (or less of an increase) in peritoneal dialysis use in the fee-for-service group compared with the salary group.